



Figure 3: Cischele landslide: type section (a), composite anchor scheme and strain gauge strip (b), remediation works with floating anchors (c).

2). They consist of a self-drilling bar with 7 tendons pretensioned and cemented inside. Thanks to the presence of inner tendons, these nails have an ultimate tensile strength increased from 1400 to 3000 kN with an increment of cost less than 20%.

Two load cells (Fig. 3) record the axial force applied behind two floating plates, while a specifically designed strain gauge strip was installed inside 2 anchor bars to monitor the tension along the passive bars. In the future, the tensional data will be crossed with inclinometers and piezometers

data, thus evaluating the correlation between variations in groundwater and superficial/deep movements.

CONCLUSIONS

The monitoring of the Cischele stabilized slope permits the analysis of the real-scale behaviour of the floating anchors system. The preliminary results give no significant post-work displacements, thus proving the viability and technical efficiency of the method.

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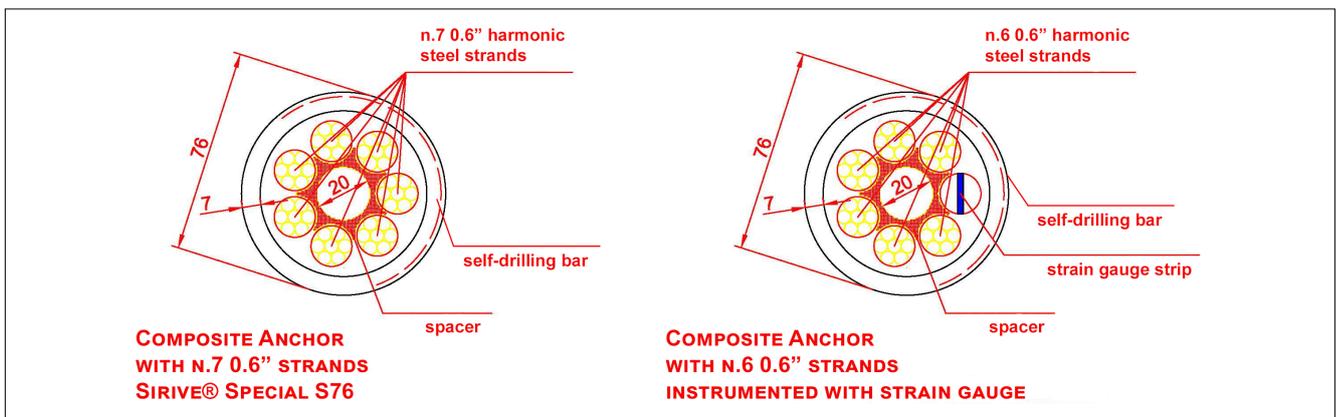


Figure 2. Composite anchor scheme and strain gauge strip.

KEYWORDS

landslide stabilization; anchors; soil nailing; slope stability; self-drilling bars.

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